

## Phosphorylation of androgen receptors at serine 515 is a potential prognostic marker for triple negative breast cancer

### Supplementary Materials

**Supplementary Table 1: Relationship between ligand-independent AR phosphorylation and cancer-specific survival in patients with ER+ve and ER-ve invasive ductal breast cancer**

	ER+ve (n = 228)				ER-ve (n = 104)			
	N (%)	10yr-CSS % (SE)	Univariate HR (95% CI)	P	N (%)	10yr-CSS % (SE)	Univariate HR (95% CI)	P
<b>Total AR expression</b>								
Low expression	89 (39)	87 (4)	1.43 (0.72–2.84)	0.309	78 (75)	69 (5)	1.41 (0.67–2.98)	0.365
High expression	139 (61)	82 (4)			26 (22)	62 (10)		
<b>AR-515 phosphorylation</b>								
Low expression	118 (52)	83 (4)	0.78 (0.41–1.51)	0.459	47 (45)	66 (7)	0.85 (0.43–1.71)	0.656
High expression	110 (48)	85 (4)			57 (55)	69 (6)		
<b>ERK1/2 phosphorylation</b>								
Low expression	82 (36)	77 (5)	0.43 (0.22–0.82)	<b>0.008</b>	69 (66)	66 (6)	0.88 (0.41–1.86)	0.728
High expression	146 (64)	88 (3)			35 (34)	71 (8)		
<b>Combined AR + AR-515</b>								
Low AR+AR-515	56 (24)	86 (5)	1.04 (0.68–1.60)	0.985	39 (38)	66 (8)	1.06 (0.65–1.73)	0.721
High AR or AR-515	95 (42)	83 (4)			47 (45)	71 (7)		
High AR + AR-515	77 (34)	84 (5)			18 (17)	61 (11)		
<b>Combined pERK1/2 + AR-515</b>								
Low pERK1/2+AR-515	58 (25)	80 (6)	0.64 (0.42–0.98)	<b>0.038</b>	36 (35)	72 (8)	0.70 (0.58–1.45)	0.249
High pERK1/2 or AR-515	84 (37)	81 (5)			44 (42)	59 (8)		
High pERK1/2 + AR-515	86 (38)	90 (4)			24 (23)	79 (8)		

**Supplementary Table 2: Relationship between ligand-independent AR phosphorylation and cancer-specific survival in patients with TNBC (*n* = 94)**

	HER2-type ( <i>n</i> = 29)				TNBC ( <i>n</i> = 65)			
	<i>N</i> (%)	10yr-CSS % (SE)	Univariate HR (95% CI)	<i>P</i>	<i>N</i> (%)	10yr-CSS % (SE)	Univariate HR (95% CI)	<i>P</i>
<b>Total AR expression</b>								
Low expression	20 (69)	46 (12)	0.39 (0.09–1.79)	0.207	52 (80)	75 (6)	3.31 (1.35–8.11)	<b>0.006</b>
High expression	9 (31)	78 (14)			13 (20)	38 (13)		
<b>AR-515 phosphorylation</b>								
Low expression	17 (59)	44 (12)	0.30 (0.08–1.12)	0.056	26 (40)	76 (9)	1.70 (0.65–4.42)	0.274
High expression	12 (41)	74 (13)			39 (60)	62 (8)		
<b>ERK1/2 phosphorylation</b>								
Low expression	21 (72)	51 (12)	0.52 (0.11–2.40)	0.390	43 (66)	70 (7)	1.33 (0.54–3.25)	0.534
High expression	8 (28)	75 (15)			22 (34)	63 (11)		
<b>Combined AR + AR-515</b>								
Low AR+AR-515	13 (45)	42 (14)	0.40 (0.16–1.01)	0.114	23 (36)	77 (9)	2.19 (1.14–4.20)	<b>0.007</b>
High AR or AR-515	11 (38)	53 (15)			32 (49)	73 (8)		
High AR + AR-515	5 (17)	100 (0)			10 (15)	30 (14)		
<b>Combined pERK1/2 + AR-515</b>								
Low pERK1/2+AR-515	10 (36)	33 (16)	0.29 (0.09–0.90)	0.076	21 (32)	85 (8)	1.35 (0.77–2.34)	0.065
High pERK1/2 or AR-515	16 (57)	68 (12)			27 (42)	51 (10)		
High pERK1/2 + AR-515	2 (7)	100 (0)			17 (26)	70 (11)		